

REMARKS

Applicant has reviewed and considered the Office Action mailed on January 22, 2003, and the references cited therewith.

Claims 11 and 33 are amended, and claim 42 is added; as a result, claims 11-42 are now pending in this application. Please charge any additional required fee to deposit account 19-0743.

Information Disclosure Statement

Applicant respectfully requests that a copy of the 1449 Form, listing all references that were submitted with the Information Disclosure Statement filed on January 16, 2003, marked as being considered and initialed by the Examiner, be returned with the next official communication.

Affirmation of Election

Restriction to the claims of Group II (claims 11-31) was previously elected. As provisionally elected by Applicant's representative, Charles A. Lemaire, on January 13, 2003, Applicant further elects to prosecute *Species I – a photovoltaic cell on the battery*.

§112 Rejection of the Claims

Claims 11-12, 14-15, 18-20, 31, and 33 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 33 is amended solely to correct antecedent-basis issues, and not relative to any prior art. Regarding all of the other rejected claims, Applicant respectfully traverses. Ion-assist energy is any energy provided by ions other than the main source of material that is being deposited. The invention describes on Page 68 line 13-17 that various sources of assist energy act to treat the surface:

“successively deposits a plurality of layers, wherein each of one or more of the layers is immediately treated (e.g., by ion assist, laser surface anneal, heat surface anneal, or kinetic treatment), according to the present invention, to impart a high-quality surface structure to that layer or those layers before subsequent layers are deposited, and without substantial heating of the underlying layer(s) or substrate”

The invention describes that various types of ions can be used for ion-assist (see, e.g., page 20 lines 2-3). The application also describes some of the advantages, e.g., page 66 line 29-page 67 line 2 “ion-assist deposition provides for higher quality cathode films (better crystal orientation) and better electrolyte films (more complete isolation and fewer pinhole defects for any given thickness.” One of skill in the art thus recognizes that the ion-assist energy is one way of treating the surface to obtain, e.g., better crystal orientation and long-range order in the deposited films. Further, one of skill in the art understands exactly what ion assist means. Therefore, claims 11-12, 14-15, 18-20, and 31 appear to be in condition for allowance, and such action is respectfully requested.

§103 Rejection of the Claims

Claims 11-12, 14-15, 18-24, 31, 33, and 39-40 were rejected under 35 USC § 103(a) as being unpatentable over Ovshinsky et al. (U.S. Patent No. 5,411,592) in view of Bates et al.____ (U.S. Patent No. 5,338,625). Applicant respectfully traverses. The Examiner has failed to provide any reference that provides an ion-assist energy. The Examiner asserts (“notes”) that that laser ablation and sputtering are ion-assist energy deposition techniques. Applicant respectfully disagrees. Sputtering, according to *The Illustrated Dictionary of Electronics, Seventh Edition* by Stan Gibilsco, is a technique for electrically depositing a film of metal on a surface, in a vacuum chamber, where the piece of metal to be deposited is made the cathode of a high-voltage circuit with respect to a nearby anode plate. The high-voltage [of incoming electrons] causes atoms to be ejected from the cathode and strike an object placed in their path, becoming deposited on it as a film. This does not meet the limitation of “ion-assist energy.” Laser ablation uses a laser to eject atoms or molecules from the source material, which are then deposited on a nearby object. Neither, without more, even provides ionized material, much less “supplies an amount of ion-assist energy to the second layer to aid in crystalline layer formation while controlling a stoichiometry of the crystalline layer without substantially heating the substrate” as recited in claim 11. Further, neither Ovshinsky et al. nor Bates et al. provide ion-assist energy. Thus claim 11 and its dependent claims 12-20, 32, 33 appear to be in condition for allowance, and such action is respectfully requested.

With regard to claim 21 and its dependent claims, Applicant notes that claim 21 is a means-plus-function claim, which must be examined by reference to the structures recited in the specification, and equivalents thereof (see 35 U.S.C. 112 ¶ 6). 35 U.S.C. §112 ¶6 requires the Examiner to consider the structure(s) described in the specification for accomplishing the function of the claimed means and equivalents thereof when examining means limitations. ¶6 allows inventors to define or claim features of their inventions as a “means” or “step” for performing a function without literally reciting structure, material, or acts in the claim itself for performing the function. However, ¶6 also limits the interpretation of these claimed features to the corresponding structure, material, or acts described in the present specification and their structural equivalents. For example, one may claim an element of an invention as “a means for fastening two boards.” Literally, this language encompasses screws, nails, glue, clamps, indeed anything that could serve the fastening function. Yet, ¶6 requires the Examiner and courts to look to the specification to determine a claim's legal scope. The Court of Appeals for the Federal Circuit in the case *In re Donaldson Inc.*, 29 USPQ2d 1845 (CAFC Feb. 14, 1994) said:

“ The plain and unambiguous meaning of paragraph six is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure. **Paragraph six does not state or even suggest that the PTO is exempt from this mandate, and there is no legislative history indicating that Congress intended that the PTO should be.**”

Ibid, 29 USPQ2d at 1848 (emphasis added). Thus, the **PTO is required by statute to look to the Applicant's specification** and to construe the “means” language recited in this claim as limited to the corresponding structure disclosed in the specification and equivalents thereof. *See* 29 USPQ2d at 1850. The Examiner has not met his burden of showing equivalent structure, material, or acts in the prior art that would anticipate this claim as interpreted under 35 U.S.C. §112¶6. Accordingly, this claim 21 and its dependent claims 39-42 appear in condition for allowance, and withdrawal of the rejection is respectfully requested.

With regard to claim 22 and its dependent claims, Applicant respectfully traverses the rejection. The Examiner has failed to show a reference “wherein the first and the second deposition stations each supply energy to the layer to aid in crystalline layer formation while controlling a stoichiometry of the respective crystalline layers without substantially heating the substrate” (claim 22 recitation). See the quotations provided above from the application's page

68 line 13-17 and page 66 line 29-page 67 line 2 that various sources of assist energy act to treat the surface for better crystal orientation and fewer pinhole defects. Accordingly, this claim 22 and its dependent claims 23-31 appear in condition for allowance, and withdrawal of the rejection is respectfully requested.

Claims 32 was rejected under 35 USC § 103(a) as being unpatentable over Ovshinsky et al. (U.S. Patent No. 5,411,592) in view of Bates et al. (U.S. Patent No. 5,338,625) as applied to claim 11 above, and further in view of Matsui et al. (U.S. Patent No. 5,558,953). Applicant respectfully traverses. Bates does show LiCoO₂. However, no combination of the cited references provide the claimed invention of claim 32, wherein ion-assist energy is supplied to the second layer to aid in crystalline layer formation. Accordingly, claim 32 appears to be in condition for allowance. Reconsideration of the rejections and an early indication of the allowability of all of the claims is respectfully requested.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6949 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date

22 April 2003

By

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 22nd day of April, 2003.

Candis B. Buending

Name

Signature

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